

Building for Wellness – Healthy Building Course for Cal Poly SLO CM Department

Lindsey Pierson

California Polytechnic State University, San Luis Obispo
San Luis Obispo, California

Construction Management programs across the country focus on educating students about the main segments of the construction industry, however, there is not courses that allow students to affiliate themselves with sustainable, healthy building practices. This senior project created the opportunity for students to learn about the rising segment trend of healthy building in construction. Students will be informed about what healthy building is and how it should be implemented into the construction and design process. Topics will focus on discussing hard and soft building components that negatively affect building occupant health and performance, as well as how each component can be changed or newly implemented. A collection of peer reviewed journals, publications, reports, videos, and the book *Healthy Buildings*, will be the reading material. The course material will provide students with solutions to implement into the design and construction of buildings to improve the wellbeing of building occupants. Students will be introduced to the three major healthy building standard accreditation organizations, IWBI WELL, Fitwel, and Living Building Challenge. This course allows for students to be exposed to data and research that is vital for progressive change in the construction industry.

Key Words: Healthy Building, Building Occupants, Building Wellness, Construction Education

Introduction

Healthy buildings are one of the fastest growing segment trends in the construction industry, but opportunities for construction management students to learn these skills is not keeping pace. The impacts of sick building syndrome and hard and soft building components have an impact on occupant health and performance. A new focus on healthy buildings and rating systems has grown to its own segment of sustainable building, construction, and design. In order to better prepare students at California Polytechnic State University (Cal Poly) in the Construction Management (CM) Program, additional educational opportunities are needed. As the result a senior project has been dedicated in the effort to creating an elective course in Healthy Buildings that better prepares the students to face the growing need in the industry. As a current student studying Construction Management, I discovered my niche in the industry is related to progressive building and design processes that are not commonly implemented. This course will create the path for Cal Poly CM Department to be the leading program in student education. Healthy building standard accreditation organizations are quickly surpassing the rate at which green building accreditation organizations were implemented. Creating a course that focuses on educating students about building components and processes that can be changed to improve health and performance of building occupants is a necessity for an advanced Construction Management program.

Background

The impacts of Sick Building Syndrome (SBS) are widely known and proven. According to a report produced by the EPA in 1991 discussing health impacts and causes of SBS, “The symptoms can be clinically defined and have clear identifiable causes” (EPA, 1991, p. 1). A multitude of studies and

reports similar to that of the EPA report have identified building components that negatively impact building health, yet for decades no major changes to the design and construction of buildings has embarked until recently. The introduction of “healthy buildings” and “building for wellness” is different than the procedures of green building because it focuses on the building occupants. This has been the first movement that highlights and identifies how buildings negatively affect building occupant’s health and provides different components and processes to implement to improve the health of people in relation to buildings. There has been little to no focus on building components that can be changed to improve factors, such as Indoor Air Quality (IAQ), due to common misconceptions of price and risk. The most effective factor to push for change in the design and construction process to focus on building for wellness is education. The lack of knowledge that professionals have in correlation to the negative health impacts buildings have on building occupants is the reason that money and risk of new design and construction are lacking. The construction industry has seen a spike of interest in certifying buildings with building wellness programs, “Compared to the first years of LEED and BREEAM certification systems, the number of [WELL] registered projects is more than 10 times larger” (Danivska & et al, 2019, p. 215). Building owners and companies are noticing that younger generations have more interest in working for companies that place focus on the wellbeing of their employees, such like Apple. There is currently no course offered at the undergraduate level for students studying to become professionals in the construction industry that focuses solely on healthy building standards and practices; Cal Poly SLO CM Department can be the first.

The proposed course will inform students of hard and soft building components that can be focused on that can alter the health impacts of building occupants. It will be imperative to inform students on direct studies that correlate to each building component. A study conducted by Joseph Allen’s Health Building research team, titled the COGfx Study, tested and compared cognitive function of building occupants in correlation to optimizing indoor air quality. The study altered factors such as doubling the ventilation rate in comparison to the current standard, and improving the levels of volatile organic compounds (VOCs) and carbon dioxide. Below is a figure of the improvements on cognitive function of the building occupants during the double blind study. The table denotes “Green+” as certified healthy building standard practices. Not only does the performance of building occupants themselves increase, but this results in higher productivity rates for their employer which results in increased profits due to the higher level of work.

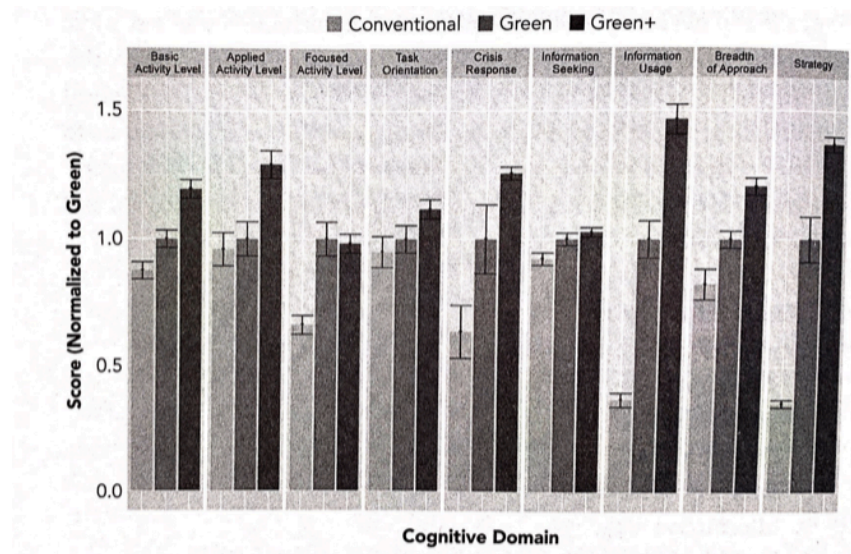


Figure 1. COGfx Study results on cognitive function from improving IAQ (Allen & Macbomber, 2020, p. 58)

Introducing students to the results of improving and altering building components that negatively affect human health will provide a greater interest and push for changes in the construction industry. There have been two senior projects in recent years in relation to wellness building standards. This information correlates to the increasing interest students have in taking a course that focuses on the topic of healthy buildings.

Purpose

Due to the rapidly increasing focus on health buildings, the industry is in demand of students with this type of knowledge. In order to better prepare students for the industry and improve their knowledge of healthy buildings a technical elective for the Construction Management program is needed. This course, Building for Wellness – Healthy Buildings, will inform soon to be professionals in the construction industry about hard and soft building components that negatively affect the health of building occupants. Students will be exposed to research stating the health and cognitive function improvements that can be obtained by improving the process of construction and design for buildings.

Process

The result of this project is a quarter long, asynchronous course for the CM Department. Since there has not been a course yet developed for undergraduate level programs there is no textbook that could be used. After an exhaustive search of literature and learning materials, the most appropriate literature, training materials, and resources were selected. One of the main sources will be a book written by Joseph Allen and John Macomber, who are leading professionals focusing on building for wellness, titled *Healthy Buildings*. The book identifies multiple topics that will be covered in the course, such as ventilation and water quality; as well as focusing on reasons why this topic should become common knowledge to all such as cost benefit analysis for all parties related to the built environment. A multitude of case studies, publications, videos, and peer reviewed journals were analyzed in order to extract prevalent information that pertains to the focuses of this course. Each module for the course will include at least partial or full readings from one of the previously noted resources. Within each of the nine modules students will be asked to complete assigned readings that will be posted on Canvas followed by 1 to 2 discussion posts. The discussion posts will require students to analyze the readings in order to understand why building processes should be altered to improve the health of building occupants. The detailed course information is discussed later in this paper.

After reviewing the literature for this course, learning objectives and a syllabus were created. Referencing current Construction Management courses, specifically CM 317 – Sustainability & Built Environment, foundational knowledge along with opportunities for further study in health buildings were noted and incorporated into the creation of this course. The course is centered around the introduction of health building; followed by understanding hard and soft building components and ways to improve or change them. Then students will analyze a cost and human benefit analysis with an introduction to the three major healthy building standard accreditation programs: IWBI WELL, Fitwel, and Living Building Challenge. The course will conclude with a final project that requires students to analyze, reflect, and present an accumulated knowledge of the course.

Course Goals

Students will examine the hard and soft building components that are proved to impact the health and wellbeing of building occupants. Students will analyze each component and the variations or changes that need to be made to improve the health of building occupants. Students will evaluate the cost and benefit analysis for both health and financial factors associated with healthy building. Students will demonstrate the process of certifying buildings to be registered as WELL, Fitwel, and Living Building Challenge. Each course is required to have course learning objectives, the ones for this course are listed below.

Course Learning Objectives

The course learning objectives were created in order for students and faculty to understand the main objectives of the course. They are designed for students to comprehend what the material will be teaching them and what should be understood. They are listed below.

- Understand the indoor health impacts of buildings on humans, and be able to describe sick building syndrome and buildingomics.
- Understand ‘hard’ building components that are associated with poor health and the processes to improve each.
- Understand how ‘soft’ building components impact building occupants.
- Understand the trend of growth in the number of buildings that are complying with well building standards.
- Remember WELL Building Institute, Fitwel, and The Living Building Challenge; and understand how each program is fostering the growth of healthy buildings.
- Analyze the increased performance of individuals and companies occupying healthy buildings.
- Analyze a project based on well certified criteria. Explain the outcomes on the building occupants.

Course Topics

The course is divided into nine modules and a final project. Each module discusses a different topic. Appendix A is a representation of the course schedule, dictating each module and the associated title, reading for the module, and the assignment for each. Appendix B is a cited references page of all course material that is included in the modules listed below.

Module 1

Module 1 is titled, The Impact of the Built Environment on Building Occupants. In this module students will be introduced to the term “Buildingomics” which was created by Joseph Allen, a forefront leader of the healthy building movement. Buildingomics is defined as “the totality of factors in buildings that influence our health, well-being, and productivity” (Allen & Macomber, 2020, p. 85). Students will understand the correlation between building components and sick building syndrome. In this module students will begin reading *Healthy Buildings*, which will be the textbook for the course. There will be discussion posts with this module for students to understand and analyze the material provided.

Module 2

Module 2 is titled, Measuring Healthy Indoor Air Quality – Ventilation, Thermal Comfort, and Water Quality. This module will begin focusing students on the hard building components that impact human wellness. There are two reading assignments that students will be required to complete, followed by a set of discussion questions. Students will be asked to analyze studies and data that demonstrate the negative impact of indoor air quality (IAQ) on building occupants. The material from this module will provide students with solutions of different material and processes that can be implemented into the design and construction process to improve indoor air quality.

Module 3

Module 3 is titled, Health Impacts of Light and Sound on Building Occupants. In this module, the readings are focused on analyzing the remaining two hard building components that impact the wellness of building occupants. Light and sound do not have as correlated of an impact on IAQ, however there are multiple studies conducted that analyze the health and cognitive function impact these components have on individuals. Students will be provided two case studies to review that discuss the impact of blue-enriched lighting on cognitive performance in either 1) school building or 2) office building. There will be associated discussion posts with reading.

Module 4

Module 4 is titled, Soft Components of Buildings Impacting Wellness. In this module students will review a section of reading published by World Green Building Council. In this reading the topics discussed are, 1) Interior Layout & Active Design, 2) Views & Biophilia, 3) Look & Feel, and 4) Location & Access to Amenities. This module gears students to the more holistic approach to healthy building standards, which has not been taught in curriculum before. There will be a discussion post for this module.

Module 5

Module 5 is titled, Cost & Human Benefit Analysis. Before this module commences, there will be the first exam covering modules 1-4. It will be a 50 question multiple choice exam, posted on Canvas. After the exam, students will complete the two readings of the week. These readings discuss the win-win scenario of healthy buildings. Misconceptions are proven to be false with the data provided. The readings discuss that healthy buildings, “create win-win value propositions for owners, occupants, developers, and society” (Allen & Macomber, 2020). Students will understand the costs of investing into healthy buildings through data and graphs. There is associated discussion questions.

Module 6, 7, & 8

Modules 6-8 cover the three accreditation services that this class will focus on; WELL Building Institute, Fitwel, and Living Building Challenge. There are videos, PowerPoints, and readings included in each module. The purpose of these modules are to familiarize students with the certification programs complying and driving the healthy building processes. These modules will also allow students to understand the purpose of building for the wellbeing of building occupants. There are discussions and questions associated with each module.

Module 9

Module 9 is titled, Future of Healthy Building. The purpose of this module is to explain the next steps once all of the previous module information is available to you. Students will comprehend a comparative publication from WELL Building Institute and Living Building Challenge to realize the joint efforts of large organizations to push this new building process forward. Students will conduct reading that focuses on steps they can take individually and with their future to be a part of the forefront of healthy building standards.

Module 10

Module 10 is the final project of the course. Students will be asked to choose a building in their local community that they are familiar with. They will then need to choose of the three certification programs discussed in the course and choose a level of certification they wish the building to achieve. The project deliverables are listed below.

- Choose a local building to be retrofitted to become certified by a healthy building standard program.
- Analyze at least four main categories with their associated features to upgrade the building.
- Identify the changes that will need to be implemented; identifying specific materials and components that will be used and their associated costs.
- Write an analysis on individual building occupants health benefits from the changes you have made. Also write an analysis on the organization/company who owns the building's results of becoming a healthy building.
- Create a presentation as if you were an accredited member of the Health Building Standard you chose to present to the owner.
- Create a voice over recorded presentation that will be posted on Canvas.

Conclusion

As it has been demonstrated that healthy buildings are rapidly growing in popularity between building owners, developers, companies, and the public; it is imperative that we provide all resources possible for students in the Construction Management department at Cal Poly to succeed. Green sustainable building, such as LEED, are the common courses taught at universities, however, these green building practices do not focus on the wellbeing of building occupants. This course introduces students to the rapidly rising building processes that focuses on the design and construction of the built environment in relation to building occupants. Appendix C of this project includes the detailed syllabus as it would be used for the CM department courses. Students learn the hard and soft building components that negatively impact human health and performance, and how each of the components can be changed or implemented. Students will broaden their knowledge of the construction industry to become professionals leading the forefront change in the construction industry.

References

Allen, J. G., & Macomber, J. D. (2020). *Healthy buildings: how indoor spaces drive performance and productivity*. Cambridge, MA: Harvard University Press.

Danivska, V., Heywood, C., Christersson, M., Zhang, E., & Nenonen, S. (2019). Environmental and social sustainability – emergence of well-being in the built environment, assessment tools and real estate market implications. *Intelligent Buildings International*, 11(3-4), 212–226. doi: 10.1080/17508975.2019.1678005

EPA. United States Environmental Protection Agency, pp. 1–3, *Indoor Air Facts No. 4 Sick Building Syndrome*. Retrieved from https://www.epa.gov/sites/production/files/2014-08/documents/sick_building_factsheet.pdf

Course Schedule - Appendix A

Module	Topic	Resource	Learning Activity
1	The Impact of the Built Environment on Building Occupants	Watch Buildingomics Video Read: EPA Sick Building Syndrome Read: <i>Healthy Buildings</i> : Preface & Chpt. 3	Discussions & Responses
2	Measuring Healthy Indoor Air Quality - Ventilation, Thermal Comfort, & Water Quality	Read: "Building Evidence for Health: Green Buildings, Current Science, and Future Challenges" Read: <i>Healthy Buildings</i> : Pgs. 87-107	Discussions & Responses
3	Health Impacts of Light and Sound on Building Occupants	Read: <i>Healthy Buildings</i> : Pgs. 110-115 Read: "Influence of blue-enriched classroom lighting on students' cognitive performance" OR "Blue-enriched white light in the workplace improves self-reported alertness, performance and sleep quality"	Discussions & Responses
4	Soft Components of Buildings Impacting Wellness	Read: "Health, Wellbeing & Productivity in Offices"	Discussions & Responses
5	Midterm Exam 1: Modules 1-4; Cost & Human Benefit Analysis	Read: "Sustainable and Healthy Built Environment" Read: <i>Healthy Buildings</i> : Chapters 4 & 5	Midterm Exam; Discussions & Responses
6	WELL Building Institute	Watch: Why WELL Video Read: WELL Introduction PowerPoint Watch: Insights from WELL Certified Projects (until 45 mins.)	Discussions & Responses
7	Fitwel	Watch: Fitwel Video Read: The Office Guide to Building Healthy Read: Fitwel Scorecard Sheet	Discussions & Responses
8	Living Building Challenge	Watch: Living Building Challenge Video Read: Introduction to LBC PowerPoint Explore: LBC 4.0 Webpage	Discussions & Responses
9	Midterm Exam 2: Modules 5-8; Future of Healthy Building	Read: WELL-LBC Crosswalk Publication Read: <i>Healthy Buildings</i> : Chapter 11	Midterm Exam; Discussions & Responses
10	Final Project	Reference past readings Provided Scorecard sheets for each certification	Final Project

Appendix B – Course Material References

Allen, J. G., & Macomber, J. D. (2020). Healthy buildings: how indoor spaces drive performance and productivity. Cambridge, MA: Harvard University Press.

Cedeno-Laurent, J.G., Williams A., MacNaughton, P., Cao, X., Eitland, E., Spengler, J., Allen, J. (2018). Building Evidence for Health: Green Buildings, Current Science, and Future Challenges. *Annual Review of Public Health*, 39(1), 291-308. Retrieved from <https://www.annualreviews.org/doi/10.1146/annurev-publhealth-031816-044420>

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Fitwel. <https://www.fitwel.org>

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International Living Future Institute. <https://living-future.org/lbc/>

International WELL Building Institute - WELL. <https://www.wellcertified.com>

“Introduction to Fitwel.” 28 Sep. 2017. <https://youtu.be/N3jOeg6x6bE>

“Living Buildings for a Living Future - Jason McLennan - TEDxBend.” 26 Mar. 2015, <https://youtu.be/gSMecC6pcGo>

Loftness, V., & Snyder, M. (2013). Sustainable and Healthy Built Environment health/healthy built environment. *Sustainable Built Environments*, 595–619. doi: 10.1007/978-1-4614-5828-9_197

“The Impact of Green Buildings on Cognitive Function.” 17 Mar. 2020, youtu.be/PxUgocrjge8.

Viola, A. U., James, L. M., Schlangen, L. J., & Dijk, D.-J. (2008). Blue-enriched white light in the workplace improves self-reported alertness, performance and sleep quality. *Scandinavian Journal of Work, Environment & Health*, 34(4), 297–306. doi: 10.5271/sjweh.1268

“What is WELL and why it matters.” 23 Jan. 2020, https://youtu.be/w0ivwp6Va_c

World Green Building Council, p. 34-48, Health, Wellbeing and Productivity in Offices: The Next Chapter for Green Building. Retrieved from <https://www.worldgbc.org/news-media/health-wellbeing-and-productivity-offices-next-chapter-green-building>

Appendix C - Course Syllabus

California Polytechnic State University, San Luis Obispo

Construction Management Department

Building for Wellness – Healthy Building

Instructor:	Instructor's name(s)
Office Location:	Office building and room number
Telephone:	Enter phone number(s) here
Email:	Enter email(s) here
Office Hours:	Enter office hours here
Class Days/Times:	Asynchronous
Classroom:	Enter classroom building and room number
Prerequisite(s):	Junior Standing

Course Description

Interdisciplinary analysis of healthy building strategies and accreditation programs that focus on applying the wellbeing of humans into the built environment. Focusing on building components, both hard and soft, that can improve the health of building occupants. A focus on three major accreditation programs, and a cost benefit analysis for implementing healthy building procedures. Course is offered in an online format. 4 lectures.

Course Goals and Learning Outcomes

Course Goals:

Students will examine the hard and soft building components that are proved to impact the health and wellbeing of building occupants. Students will analyze each component and the variations or changes that need to be made to improve the health of building occupants. Students will evaluate the cost and benefit analysis for both health and financial factors associated with healthy building. Students will demonstrate the process of certifying buildings to be registered as WELL, Fitwel, and Living Building Challenge.

- Understand the hard building components that impact building occupant health and the degree of which they do.
- Understand the soft building components that impact building occupant health and the degree of which they do.
- Understand how each of the hard and soft building components can be modified or changed to improve the health of building occupants.
- Understand the differences and similarities between WELL Building Institute, Fitwel, and Living Building Challenge.
- Analyze an existing building to be retrofitted to receive a healthy building standard accreditation.

Course Learning Outcomes (CLOs):

1. Understand the indoor health impacts of buildings on humans, and be able to describe sick building syndrome and buildingomics.
2. Understand 'hard' building components that are associated with poor health and the processes to improve each.
3. Understand how 'soft' building components impact building occupants.
4. Understand the trend of growth in the number of buildings that are complying with well building standards.
5. Remember WELL Building Institute, Fitwel, and The Living Building Challenge; and understand how each program is fostering the growth of healthy buildings.
6. Analyze the increased performance of individuals and companies occupying healthy buildings.
7. Analyze a project based on well certified criteria. Explain the outcomes on the building occupants.

Student and Program Learning Outcomes

The American Council for Construction Education (ACCE) is the accrediting body for Cal Poly's construction management program. The ACCE requires achievement of 20 student learning outcomes(SLOs). The construction management program has identified 20 program learning outcomes (PLOs) that equal or exceed the ACCE SLOs and 5 additional idiosyncratic PLOs.

This course supports the following PLOs:

PLO 2: Create oral presentations appropriate to the construction discipline.

PLO 6: Analyze professional decisions based on ethical principles.

PLO 8: Analyze methods, materials, and equipment used to construct projects.

PLO 12: Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.

PLO 18: Understand the basic principles of sustainable construction.

PLO 21: Understand the role construction managers play in enhancing the needs of society.

PLO 22: Understand the importance of creating and planning for continuing education and lifelong learning.

Topical Outline, Outcomes, and Method of Assessment

This course has embedded assessment instruments for the PLO(s) listed below:

PLO 8: Analyze methods, materials, and equipment used to construct projects.

PLO 18: Understand the basic principles of sustainable construction.

PLO 21: Understand the role construction managers play in enhancing the needs of society.

An overview of content, course learning outcomes, program learning outcomes, instructional activities, and assessment measures, is listed in the table below.

Choose Unit Type	Topical Outline	CLOs	PLOs	Instructional Activities	Method of Assessment
1	Module 1: The Impact of the Built Environment on Building Occupants	1		Discussion & Responses	Rubric
2	Module 2: Measuring Healthy Indoor Air Quality – Ventilation, Thermal Health, and Water Quality	2	8	Discussion & Responses	Rubric
3	Module 3: Health Impacts of Light and Sound on Building Occupants	2	8	Discussion & Responses	Rubric
4	Module 4: Soft Components of Buildings Impacting Wellness	3	8	Discussion & Responses	Rubric
5	Midterm 1: Modules 1-4 Module 5: Cost and Human Benefit Analysis	6		Midterm Discussion & Responses	Multiple Choice Exam; Rubric
6	Module 6: WELL Building Institute	5		Discussion & Responses	Rubric
7	Module 7: Fitwel	5		Discussion & Responses	Rubric
8	Module 8: Living Building Challenge	5		Discussion & Responses	Rubric
9	Midterm 2: Modules 5-8 Module 9: Future of Healthy Building	4	21	Midterm Discussion & Responses	Multiple Choice Exam; Rubric
10	Final Project: Analyzing an Existing Building to Receive a Healthy Building Accreditation	7	18	Project	Rubric

Required Texts/Reading

Textbook

Healthy Buildings How Indoor Spaces Drive Performance and Productivity. Joseph G. Allen, John D. Macomber. (ISBN 9780674237971). Available at: <https://www.amazon.com/Healthy-Buildings-Indoor-Performance-Productivity/dp/0674237978>

Other Readings

Supplemental readings are posted on the course Canvas page.

Other Equipment/Material Requirements

Access to a computer.

Classroom Protocol

As a student, you are responsible to:

- Students are required to use the course Discussion Forums to communicate to their classmates.
- Class Questions, Assigned Discussion Forums, Assigned Response Forums, Peer Review/Feedback should be reviewed by the instructor and students within 48 hours or less.
- Students should post their assigned work to the forum threads by 11:59pm PST, and respond to at least 2 other classmates on noted discussion posts by 11:50pm PST. Unless specified differently due to a holiday.
- Peer Review/Feedback must be supportive, professionally constructive and mindful of each other.
- Students will need to spend a minimum of 12 hours a week on the course content, readings, discussion forums, and projects.
- Active participation within an online environment can strengthen learning to provide stronger comprehension and retention of material.
- If the student is unable to submit an assignment via Canvas or email due to technical issues, the student must call and inform the instructor of the issue and leave contact information so that the instructor can get back to the student.

Assignments and Exams

The following assignments and their associated point values are subject to change by the instructor as needed.

Description	Points
Discussions & Responses	40%
Midterm Exam 1 and 2	15 points/each
Final Project	30 points
Total Points Possible	100 points

Late/Missed Work and Make-Up Policy

Unexcused late discussion posts and responses will not be accepted and will be assigned a grade of 0%. This is a firm policy.

Grading Policy

Students with a sound grasp of the materials and a demonstrated ability to analyze those materials at a satisfactory to above average level for undergraduate students can expect to receive a grade of "B". Grades below "B" only will be assigned for performance that is less than satisfactory. The grade of "A" will be reserved to designate excellence. This will require not only a sound grasp of the materials and the demonstration of an ability to analyze them at an undergraduate level, but also a clear capacity to synthesize and evaluate the materials and apply principles contained for purposes of effective communication and problem solving. There is not a preconceived designation of the number of students to receive each grade, nor any ceiling on the number of "A's" to be assigned if all students exhibit the high standard of

performance expected for that grade. Incomplete grades will be granted only for extenuating circumstances and advanced discussion with the course instructor.

Listed below is the grading scale for this course.

Letter Grade	Percentage	Performance	Definition
A	93 – 100%	Excellent Work	Superior Attainment of Course Learning Outcomes
A-	90 – 92%	Mostly Excellent Work	
B+	87 – 89%	Very Good Work	Good Attainment of Course Learning Outcomes
B	83 – 86%	Good Work	
B-	80 – 82%	Mostly Good Work	
C+	77 – 79%	Very Acceptable Work	Acceptable Attainment of Course Learning Outcomes
C	73 – 76%	Acceptable Work	
C-	70 – 72%	Mostly Acceptable Work	
D+	67 – 69%	Mostly Poor Work	Poor Attainment of Course Learning Outcomes
D	63 – 66%	Poor Work	
D-	60 – 62%	Very Poor Work	
F	0 – 59%	Failing Work	Non-Attainment of Course Learning Outcomes

University Policies

Participation and Attendance

Insert student participation and attendance expectations here.

Students are responsible for knowing the University policy regarding class attendance. See this link on [Class Attendance Policy](#) provided on the university website.

Add/Drop Policy

Students are responsible for knowing the University policies, procedures, and schedule for dropping or adding classes. See this link on [Add/Drop Policy](#) provided on the university website.

Academic Integrity

Students are responsible for knowing the [Academic Honesty Policy](#).

Students with Disabilities

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Disability Resource Center, Building 124, Room 119, at (805) 756-1395, as early as possible in the term, as accommodations may take several weeks to arrange. If

you are a student with a disability, please consider discussing your needs and possible accommodations with me as soon as possible, and visit the [DRC Website](#) for additional information.

SensusAccess

SensusAccess is a self-service, alternate media solution made available by Kennedy Library to automatically convert files into a range of alternate media including audio books (MP3 and DAISY), e-books (EPUB, EPUB3 and Mobi) and digital Braille. The service can also be used to convert inaccessible files such as image-only PDF files, JPG pictures and Microsoft PowerPoint presentations into more accessible and less tricky formats. This service is available at no charge for all Cal Poly students, faculty, staff and alumni. For additional information, visit [SensusAccess at the Kennedy Library](#).

Diversity and Inclusion

Cal Poly considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Cal Poly expects every member of the university community to contribute to an inclusive and respectful culture for all in its classrooms, work environments, and at campus events. For more information on resources related to diversity and inclusion, please visit the Office of University Diversity & Inclusivity website at diversity.calpoly.edu.

Technical Support and Contact Information

Support is available for troubleshooting and access issues for PolyLearn. Please visit the [PolyLearn Student Support Web Site](#) for further information.

Campus Resources to Support Student Learning

Cal Poly offers programs and resources that are available to assist students during your academic studies, such as the [Cal Poly Student Academic Services Web Site](#).